

MAT 800

TOPICS IN ANALYSIS – QUASICONFORMAL GEOMETRY in 2D

Fall 2015

COURSE INFORMATION

Instructor: *Tadeusz Iwaniec*

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Office Hours: Tuesday 2:00 - 3:00 pm
Thursday 2:00 – 3:00 pm
At other times by appointment

Classes: Tu Th 12:30 pm -- 1:50 pm Carnegie Building 111

Text: Notes will be provided during the course

Prerequisites: I will assume some knowledge of Complex Function Theory, Measure, Integration, Calculus in Several Variables and basics in Functional Analysis.

Course Description:

The course presents classical developments in the theory of planar quasiconformal mappings with a particular focus on the interactions with partial differential equations and complex analysis. The lectures explain that the existence and regularity of solutions to second-order elliptic systems (linear and nonlinear) are determined by geometry. No prior exposure to these topics is assumed. We shall review basics in complex functions and PDEs.

The PDF files and hand written notes will be provided to all participants.

Attendance and active participation during lectures is the basis for passing the course

To make these lectures available to students whose mathematical knowledge may be limited, every effort will be made to reduce to a minimum the technical complications and mathematical requirements. You are invited to pursue the exercises given occasionally during the course. Some of them are far from routine.

Students with disabilities. If you believe that you need accommodations for a disability, please contact the Office of Disability Services(ODS), <http://disabilityservices.syr.edu>, located in Room 309 of 804 University Avenue, or call (315) 443-4498 for an appointment to discuss your needs

and the process for requesting accommodations. ODS is responsible for coordinating disability-related accommodations and will issue students with documented Disabilities Accommodation Authorization Letters, as appropriate. Since accommodations may require early planning and generally are not provided retroactively, please contact ODS as soon as possible. Related link: <http://disabilityservices.syr.edu/faculty-staff/syllabus-statement/>

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